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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/868,737 | 10/15/2001 | YOSHIHIRO HIRATA | KOD9B.001APC | 6540 |

20995 7590 07/25/2003

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EXAMINER

BHAT, NINA NMN

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1761

DATE MAILED: 07/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,737

Applicant(s)

HIRATA ET AL.

Examiner

N. Bhat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37, CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, applicant recites "A method for producing water containing fullerenes, which include water molecules and are floating in water by burning a mixed gas of oxygen...." Applicant should be more specific in drafting the claims and use recitations which include a transitional phrase such as comprising, consisting of, consisting essentially of. For example, applicant could recite in claim 1, "A method for producing water containing fullerenes which include a mixture of water molecules and fullerenes comprising the steps of, providing an apparatus which burning a mixed gas of oxygen and hydrogen in high pressure water and burning a graphite bar using the combustion gas generated there by producing fullerenes in water." In claims 3 and 4 the claims appear to be incomplete, it is unclear what hydrogen is attached to in claim 3 and in claim 4 it is unclear what a filtration system for removing carbon residue is attached to. Appropriate correction is required. In claim 5, applicant should draft the claim as a product by process of claim 1 which is used in making a healthy drinking water. Water by definition includes water molecules. Claim 5 is incomplete and it is unclear what applicant is purifying, if applicant purifies the water, the water could be devoid of fullerenes. It is also unclear what applicant means by "floating in water". This recitation is not necessary. Fullerenes or fullerenes need to be modified in order to be water-soluble so "floating in water" is not necessary in the

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claim. Applicant is further requested not to use "characterized in that" language in drafting claims and can replace "characterized in that" with --wherein--.

2. Claim1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

3. Claims 2-5 are would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

The invention relates to a method of producing water which includes fullerenes by burning a mixed gas of oxygen and hydrogen is combusted wherein a pure graphite bar is inserted and heating in the combustion gas thereby producing fullerenes. The hydrogen and oxygen provided is from the electrolysis of water, the process as claimed provides a water containing fullerenes and unburned carbon which can be further purified to provide a drinking water including water and fullerenes.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Friedman et al. teach a water-soluble fullerenes with antiviral activity. Howard et al. teach production of fullerene nanostuctures in flames. Howard et al. teach the production of fullerene soot in flames.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 703-308-3879. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 703-308-3959. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5665.



N. Bhat
Primary Examiner
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July 21, 2003